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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 2, 2018/2019

### **MVR2043 – SIMULATION SCRIPTING** ( All sections / Groups )

07 MARCH 2019  
9.00 a.m. - 11.00 a.m.  
( 2 Hours )

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#### INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 6 pages with 15 objective questions and 10 subjective questions only.
2. Answer **ALL** questions in section **A** and **C**. Answer **FIVE** out of **SEVEN** question in section **B**. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**Section A: Objective Questions****(Total: 15 Marks)**

1. \_\_\_\_\_ is a type of VR environment in which subjects are visually isolated from the real environment.
  - A. Immersive
  - B. Semi immersive
  - C. Non-immersive
  - D. Augmented
  
2. \_\_\_\_\_ is a term to describe the extent to which a user can modify form and content of a mediated environment.
  - A. Vividness
  - B. Interactivity
  - C. Richness
  - D. Mapping
  
3. \_\_\_\_\_ can keep track of position.
  - A. Motion analyzers
  - B. Motion Trackers
  - C. HMD
  - D. SMD
  
4. \_\_\_\_\_ Reality is the merging of real and virtual worlds to produce new environments and visualizations where physical and digital objects co-exist and interact in real time. not just overlays but anchors virtual objects to the real world and allows the user to interact with the virtual objects.
  - A. Virtual
  - B. Augmented
  - C. Mixed
  - D. Extended
  
5. HMD stands for?
  - A. Head Made Display
  - B. Head Masked Display
  - C. Head Mounted Display
  - D. Head Mounted Detection

**Continued .....**

6. How much does it cost to publish an app on Google Play?
  - A. \$99/year
  - B. \$25/year
  - C. One-time fee of \$25
  - D. One-time fee of \$99
7. NavMesh Agents requires a particular **Component** which is determined by a **Vector3** typed variable and determines its end path. What is that component?
  - A. Auto Braking
  - B. Radius
  - C. SetDestination
  - D. Acceleration
8. What kind of variable is accessible throughout the script but is unseen in the inspector window in Unity3D?
  - A. Private
  - B. Local
  - C. Public
  - D. Hidden
9. **TRANSFORM**, can be used for all except...
  - A. Rotate an object
  - B. Change an object's textures
  - C. Move an object in space
  - D. Scale an object's size
10. "The process collects the Render Meshes and Terrains of all Game Objects which are marked as Navigation Static, and then processes them to create a navigation mesh that approximates the walkable surfaces of the level." The above description is clearly suited for which **Feature** in Unity3D?
  - A. Creating Off-Mesh Links
  - B. Using NavMesh Agent with Other Components
  - C. Creating Terrain
  - D. Building a NavMesh

Continued .....

11. What is the difference between 'float', 'int', and 'bool'?
  - A. float = 0.1f, int = 1, bool = true
  - B. float = 1 int = 0.1f, bool = true
  - C. float = 0.1f, int = true, bool = 1
  - D. float = true, int = 1, bool = 0.1f
12. World Zero in the three-dimensional world refers to \_\_\_\_?
  - A. An object origin coordinate
  - B. Vector2 (0,0,0)
  - C. The coordinate 0,0,0 in relation to the game world
  - D. Vector3(0,0,0)
13. Which one of the following is **valid** Generic Function Definition in UnityScript?
  - A. T FuncName<T>();
  - B. function FuncName<T>(): T;
  - C. function FuncName.<T>(): T;
  - D. void FuncName<T>();
14. Using the following you are able to **change parent** of GameObject?
  - A. hudCamera.transform.parent = hudSelectedObject.transform;
  - B. hudCamera.transform.SettingParent(hudSelectedObject.transform);
  - C. Both
  - D. None of the above
15. \_\_\_\_\_ is are a common concept to all 3D applications, as they provide the means to set the visual appearance of a 3D model. From basic colors to reflective image-based surfaces?
  - A. Physics
  - B. Navigation
  - C. Material
  - D. Audio

Continued .....

**Section B: Subjective Questions****Answer any 5 (FIVE) questions ONLY.****(Total: 10 Marks)**

1. What is Vuforia?  
(2 Marks)
2. Explain the procedure on how to make AR app with Vuforia and Unity.  
(2 Marks)
3. List down 4 augmented reality SDK for AR development.  
(2 Marks)
4. Define what is SLAM technology.  
(2 Marks)
5. Define what is Image Target components in the Vuforia SDK.  
(2 Marks)
6. Define what is Cloud Anchors for AR Kit and AR Core.  
(2 Marks)
7. How to enabling Unity VR support?  
(2 Marks)

**Section C: Subjective Questions****Answer all questions.****(Total: 15 Marks)**

1. Explain the issue with the code below and provide an alternative implementation that would correct the problem.

(4 Marks)

```
using UnityEngine;
using System.Collections;
```

```
public class TEST : MonoBehaviour {
    void Start () {
        transform.position.x = 10;
    }
}
```

**Continued .....**

2. Write down C# script for selecting 3D object in AR Scene using raycast method for Android device. (4 Marks)

3. Write the required **function** that does the following: (7 Marks)

- Write down the script to hide a GameObject.
- Get the function “DoSomething” inside the other GameObject named “Hand”.
- Change a face recognition mask GameObject if player press the button

**End of Page.**

